



Business Logistic as Predictor on the Financial Performance of SMEs in Tagum City, Philippines

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Abstract: *The goal of this study was to determine the level of business logistics and its relationship to the financial performance of Small Medium Enterprises (SMEs) in Tagum City. SMEs will benefit from this study by having a better understanding of how business logistics improve a company's financial performance. This study used a non-experimental quantitative research design utilizing a correlational technique. There was a total of 308 respondents in this study. The following summary of findings was drawn based on the result of the study. The respondents' response in the level of Business Logistics of SMEs in Tagum City is high. This means that business logistics is much observed at all times among the SMEs of Tagum City. Among the four indicators of business logistics, forecasting and demand management has the highest mean score which means that SMEs of Tagum City are considering more in projecting the potential changes in the customers' future demand. Data and information are essential in establishing a positive client relationship. As a result of the findings and conclusions, the following recommendations are suggested; Managers and business owners should observe business logistics since they are the one who implements the strategies into action for the company's operations, and business logistics influences and improves business financial performance.*

Key Words: *accountancy, business logistics, financial performance, Small and Medium Enterprises (SMEs), Philippines*

1. INTRODUCTION:

Global concerns are increasing, and firms are developing logistics solutions to improve corporate operations. Logistics capacity is being emphasized since it improves corporate operations and profitability. Enterprises are implementing growth actions tied to supply chain operations since they directly relate to their objectives. According to Rao's (2020) research, organizations use technology to secure their logistical information. There are problems at every step of corporate operation, and as a result, traditional logistics strategies have undergone substantial modifications.

According to Agyabeng-Mensah, Afum, and Ahenkorah (2020), extreme variations in demand for commodities affect the firm's logistic operations. When an organization's transportation activities rise, it significantly influences the environment and brand name. Due to the rapid pace of change, management is focusing on policies and developing measures to reduce the negative impact on the environment. Logistics operations impact various elements, including economics, financial performance, and competitive advantage (Zeng and Wudhikarn, 2018). The benefits that SMEs should bring to the government and the community, such as job creation, poverty reduction, and industrialization, have been constrained due to their poor performance in Tagum City. SMEs are driven to focus their small and hard-earned resources on those sectors of production that can provide the highest returns for shareholders due to a lack of resources (Murphy et al., 2012). Nevertheless, the researchers only have come across a few researchers as a ground for how supply chain management affects the financial performance of SMEs because other dissertations are focusing on how business logistics affect supply chain management and some other lines of business.

1.1. Research Objectives:

This study was conducted to determine the domain of business logistics that can significantly predict the financial performance of Small Medium Enterprises (SMEs) in Tagum City. More specifically, this aims to arrive at the following objectives:

- 1.To assess the level of business logistics of Small Medium Enterprises (SMEs) in Tagum City, in terms of
1.1 Transportation;1.2 Warehousing; 1.3 Forecasting and Demand Management; 1.4Reverse Logistics



- 2.To find out the level of financial performance of Small Medium Enterprises (SMEs) in Tagum City, in terms of 2.1 Liquidity Ratio; 2.2 Debt Ratio; 2.3 Profitability Ratio; 2.4Cash Flow Ratio; 2.5Operating Performances Ratio
- 3.To determine the significant relationship between the level of business logistics and the financial performance of Small Medium Enterprises (SMEs) in Tagum City.
- 4.To determine which of the domains in business logistics significantly predict the financial performance of SMEs in Tagum City.

1.2. Hypotheses:

The following null hypotheses were treated at 5% level of significance, which states that there is no significant relationship between business logistics and financial performance of SMEs in Tagum City. There is no domain in business logistics that significantly predicts the financial performance of SMEs in Tagum City.

1.3.Theoretical Framework:

This study is anchored on the Resources-Based View Theory by Penrose (1959), is developed in the seminal work of Barney (1991), Connor (1991), and Wernerfelt (1984), and is the dominant framework in the strategy literature (Newbert 2007). RBV is primarily used to identify a firm's competitive advantage by combining valued tangible and intangible resources. To transform a short-term competitive edge into continuous long-term competitiveness, it is necessary to have an unreplaceable great value of resources. (Kraaijenbrink, Spender, & Groen, 2010; Tan, Ng, Fong, Chong, & Sukumaran, 2016; Wernerfelt, 1984).

2. METHOD:

2.1. Research Design:

The study's research design utilized non-experimental quantitative research using correlational techniques to investigate the research problem. Correlational research aims to determine the relations among two or more variables (Bursal & Paznokas, 2006). The correlational study is an essential type of educational and psychological investigation. A basic understanding of correlational approaches is required for research consumption and execution. Information is obtained, and descriptive statistics are employed to analyze it. Furthermore, correlational research aims to identify the relationships between two or more variables. Thus, correlational research is a little more involved than descriptive research; after identifying the essential variables, the relationships between those variables are studied. Correlational research looks into various elements, such as the nature of the link between two or more variables and the theoretical model that could be constructed and tested to explain these findings. Correlation does not imply causation (Lomax, & Li, 2013).

2.2. Research Locale, Population and Sample:

The findings of this study focus specifically on the context of the Small Medium Enterprises (SMEs) in Tagum City, Davao del Norte. Tagum, officially known as City of Tagum is the capital city of Davao del Norte. The entity owner or manager is chosen as the respondents and through purposive sampling. They answered the questionnaire of the study. For questionnaire sample size is 308 as it takes minimum time and provides authentic information. The researchers adopted purposive sampling, also known as judgmental sampling because the researchers can gain information from the respondents who are part of SMEs.

3. RESULT AND DISCUSSION:

RO1: Level of Business Logistics of SMEs

Shown in Table 1 are the mean scores for the indicators of Business Logistics with an overall mean of 4.14, with a descriptive equivalent of high or much observed and an overall standard deviation of 0.74. This means that the level of Business Logistics of Small Medium Enterprises (SMEs) in Tagum City is often observed in a majority of the cases in terms of transportation, warehousing, forecasting and demand, and reverse logistics.

Among all the indicators, *Forecasting and demand management* obtained the highest mean of 4.41 or very high with a standard deviation of 0.59, which means that the level of business logistics is very much observed; followed by *Reverse logistics* with a mean of 4.16 or high with a standard deviation of 0.73, which means that the level of business logistics among SMEs in Tagum City are much observed; next is *Transportation* with a mean of 4.08 or high with a standard deviation of 0.92, which means that the level of business logistics among SMEs are much observed; lastly, *Warehousing* with a mean of 4.00 or high with a standard deviation of 0.97, which means that the level of business logistics are much observed.



Table 1. Level of Business Logistics of SMEs

Indicator	Mean	SD	Descriptive Level
Transportation	4.08	0.92	High
Warehousing	4.00	0.97	High
Forecasting and Demand Management	4.41	0.59	Very High
Reverse Logistics	4.16	0.73	High
Overall	4.14	0.74	High

In the level of Business Logistics, *Forecasting and demand* generated the highest mean, which means that the business has sufficient data to forecast supply and demand. Moreover, the business is aware of social media trends that help them become aware of the customers' preferences. Also, this means that the supply ordering of the business is time-based. Followed by *Reverse logistics*, the business improved its customer satisfaction and reduced its logistics cost. The result also signifies that the business returns defective or wrong inventories. Reverse logistics is an excellent asset for acquiring a competitive advantage and a value-added strategy that affects client relationships. Moreover, the business employs resellers or outlets in a secondary market to broaden its scope and cater to more customers. In improving performance and competitiveness, reverse logistics competencies are required to successfully handle returns, such as capital structure, transportation, centralized gathering, data collection, refurbishing or remanufacturing, and disposition.

Next is *Transportation*, which means that the source or supplier of the stock has a proper courier and can deliver merchandise well to the customers. Since customers are one of the most important to consider in doing business, it is a must to deliver their merchandise well. Once the business fails to do it, it will lose the customers' loyalty, resulting in revenue loss. Moreover, there is an additional charge to those customers who want to deliver their orders door to door—delivering orders door to door helps improve the competitiveness of almost all aspects of business operations, including sales, logistics, storage, production, and customer support functions. Lastly, *Warehousing* means that the business has an ideal warehouse size and enough stocks. By utilizing intelligent warehousing, SMEs may avoid large swings in output levels induced by uncertainties and variations in demand patterns. It allows for the consolidation of smaller volumes into more oversized cargoes or the delivery of less-than-truckload packages while saving money on transportation. Also, the warehouse is near the operation area or where the business is located. The respondent's level of Business Logistics of SMEs in Tagum City is high. This means that Business Logistics is much observed at all times among the SME's of Tagum City. Among the four indicators of business logistics, forecasting and demand management generate the highest mean score, which means that SMEs of Tagum City is considering more in projecting the potential changes in the customers' future demand. In the view of Hofmann & Rutschmann (2018), forecasting is essential in business success. Data and information are essential resources, and their analysis motivates businesses to improve their relationships with their partners and consumers. Proper demand planning helps the business effectively align inventory levels with the actual demand (balance in the supply and demand). The business can fulfill the consumers' expectations, maintain its competitiveness, and enhance profitability for a particular channel or product item. This shows that projections of the future and the possibility of changes in the demand are essential in managing the business effectively.

Followed by reverse logistics that have a significant influence on financial performance, SME's in Tagum City deal with managing the product returns from the consumers. The view of Russo & Cardinalli (2012) explains that a better practice of reverse logistics helps the company attain higher customer value and lessen the consumer's risk when purchasing the goods. These reverse logistics establish a good relationship between the business and the customers, and the proper implementation ensures the company's competitiveness. The study of Hansen et al. (2018) explains that reverse logistics methods not only minimize waste and its environmental impact. The possibilities of recoveries can also lower costs, increase the efficiency of the operations, enhance the level of consumer service and profitability, and the company's public image. Firms will need to understand better how to manage waste flows as part of their strategic and integrated business operations to gain a competitive advantage and reduce environmental impact.

Next is transportation, which means that SMEs in Tagum City recognize transportation's importance in their business operation. As to De Keizer et al. (2017) study, a fresh food supply chain's logistics network is based on trade-offs between delivery lead time, location costs, transportation costs, and inventory costs. The annual profit in the logistics network can be maximized when the customers' expectations for product quality are met safely. Transportation plays a vital role in the business logistics process connected to financial performance. The delivery of the product to its leading destination is essential; proper transportation could give the business a high level of customer satisfaction, leading to earning a high income. Last is, warehousing where it obtains the lowest mean score



among the four indicators of business logistics which means that SMEs in Tagum City is securing the safety of their products by storing them in the warehouse or appropriate storage space. In Abushaikha, Salhieh, & Tower (2018), warehousing also involves tracking the inventories in and out of the products. The result appears that warehousing is suitable for every business to ensure that the goods or items are appropriately stored before distributing them to the customers.

RO2: Level of Financial Performance of SMEs

Shown in Table 2 are the mean scores for the indicators of the Financial Performance of SMEs in Tagum City with an overall mean of 3.96, which is described as high, with a standard deviation of 0.64. The high level could be attributed to the high rating given by the respondents in all indicators. This means that the respondent's response to the financial performance is much observed among the respondents of SMEs in Tagum City at all times in a majority of the cases in the items of liquidity ratio, debt ratio, profitability ratio, and operating performance ratio. The cited overall mean score was the result gathered from the following computed mean scores from highest to lowest: operating performance ratio with a mean score of 4.19 or high, with a standard deviation of 0.64; liquidity ratio with a mean score of 4.04 or high with a standard deviation of 0.68; debt ratio with a mean score of 3.82 or high with a standard deviation of 0.72; and profitability ratio with a mean score of 3.78 or high with a standard deviation of 0.86.

Table 2. Level of Financial Performance of SMEs

Indicator	Mean	SD	Descriptive Level
Liquidity Ratio	4.04	0.68	High
Debt Ratio	3.82	0.72	High
Profitability Ratio	3.78	0.86	High
Operating Performance Ratio	4.19	0.64	High
Overall	3.96	0.64	High

The top quality that was observed at all times and is one of the indicators with a high mean and outstanding result is *the Operating performance ratio*. The result signifies that the business collects receivables as soon as possible to maintain its business operation. Moreover, the business can still have a large volume of sales while employing few employees, which means that the business is not that expensive to run. Also, the business replaced its fixed assets after its useful life. Regarding the *Liquidity ratio*, which every business entity should have to pay short-term obligations, the result shows that SMEs much observe it in Tagum City. This indicates that the business delay purchases or consider long-term borrowing to repay short-term debt. In addition, the business has dramatically maintained its petty cash funds because it can access cash quickly to support immediate demands. Also, the business can generate cash to meet short-term financial commitments. The generated cash is either from the business itself or another source of income, such as passive income.

This is followed by the *Debt ratio* that is also much observed among SMEs in Tagum City. It determines the capacity of the organization to repay its financial liability when they become due. The business also uses long-term debt to support its operation. Moreover, the business assesses its ability to expand through additional debt or other investments. The business prefers to use personal capital than borrowing capital from creditors. Debt ratios demonstrate the capacity of the business to repay its principal liability, pay interest on its borrowed funds, and meet its other financial responsibilities. It typically relates a business obligation to its assets. In connection, *the Profitability ratio* is also much observed. This means that businesses can report and pay dividends annually. The company sells fast-selling and fast-moving inventories. It assesses the capacity of the business to generate profit from transactions, assets, and value. These measure the capacity of the business to earn profit, benefits, and cash flows concerning some parameters, most commonly the amount of cash contributed. They demonstrate how well a company's benefit is managed. The respondent's response level in the Financial Performance of SME's in Tagum City appears on the high level. This means that all indicators in the Financial Performance of SMEs were much observed at all times. Among the financial performance indicators, the operating performance ratio attains the highest mean score, which means that SMEs in Tagum City generate money and utilize their assets efficiently. As to Jooste (2007) study, the operating performance ratio helps assess the company's usage of their assets or resources to generate income. This ratio helps examine how the business performs its operations effectively and efficiently. Treadwell (2015), a high-income ratio of every employee indicates that employees create sufficient sales or income for the business. In contrast, low productivity indicates a low ratio in the performance of employees. It also shows that the business is performing well by earning a high income.



Followed by liquidity ratio, which means SMEs in Tagum City can meet their short-term obligations when they become due. The results show that a high profitability ratio is favorable to earning a high income. The result affirmed the study of Wohlenr (2017), liquidity ratio is an integral factor in the company's operations because it assesses the sustainability and profitability of the firm. This ratio measures the company's ability to pay its liabilities to its creditors, and using this ratio enables the company to determine whether the firm can settle its obligations. Next is the debt ratio; SMEs in Tagum City apply debt to expand their operations and sustain their financial needs. The results indicate that allowing the business to borrow funds to finance the business has a good effect. The study of Kenton (2019) shows that borrowings help the business sustain its operation and meet its financial obligations. There is a favorable impact on profitability, the size of the company, and its liability or debt that supports the operation of their business. Last is the profitability ratio, which attains the lowest mean scores; this kind of financial performance indicator shows that SMEs in Tagum City used this ratio effectively to measure the performance of their operations. This affirmed the study of Tulsian (2014); this ratio enables the firm to measure its profitability, benefits, and cash flows. This will determine if the company is performing well. Gitman and Zutter (2012) Profitability ratio are essential in the company as it is used as a metric to assess the firm's success. It provides a clear image of the financial reporting of the firm. It demonstrates a company's potential to profit over a specific period by increasing revenues, assets, and capital stock.

RO3: Significant relationship between Business Logistics and Financial Performance

The study's critical purpose was to determine whether or not business logistics have a significant relationship with financial performance. Pearson-R was used to determine the correlation between the two variables. Computations of the results are shown in Table 3, the results revealed that business logistics and financial performance yields an R-Value of 0.594, which is significant. The results are due to the P-Value of 0.001, which is lower than the level of significance of 0.05. This leads to the decision that the null hypothesis, which states that there is no significant relationship between business logistics and the financial performance of SMEs in Tagum City, is rejected. This further means that there is a significant relationship between the two variables correlated. The study on the relationship between business logistics and financial performance showed a positive association. Therefore, the correlation results exemplify that there is also an increase in financial performance in every increase in business logistics.

Table 3. Significance of the Relationship between Business Logistics and Financial Performance of SME's

Variables	Mean	SD	r-value	p-value	Decision @0.05
Business Logistics	4.14	0.74	0.594*	<.001	Ho is rejected
Financial Performance	3.96	0.64			

*Significant at 0.05 significance level

The study reveals a significant relationship between business logistics and the financial performance of SMEs in Tagum City. This indicates that Business Logistics influences the Financial Performance of SMEs in Tagum City. The results indicate that business logistics plays a vital role in attaining a high level of performance. Business logistics helps to facilitate the operations of the SMEs to achieve high profitability and customer satisfaction while reducing its cost or expenses. The correlation between SMEs' overall Business Logistics and Financial Performance in Tagum City was significant. This finding affirmed the study of Schramm-Klein, & Morschett (2006) that logistics performance gives more significant benefits to the company. It reduces business costs while earning higher revenue. An exemplary implementation of business logistics improved the company's financial performance. It significantly involves good relationships with the customers, increased sales growth rate, market share growth, and customer satisfaction. This means that a good performance of business logistics operation can give the business a better financial performance, including higher profitability and enhancing the company's overall performance.

RO4: Regression Analysis on the influence of Business Logistics on Financial Performance of SMEs in Tagum City

Using the regression analysis, the data revealed that the influence of business logistics on the financial performance of SMEs in Tagum City has the F-Ratio of 63.655 and a corresponding P-Value of 0.001. This means that business logistics significantly influence financial performance since the probability value is less than 0.05. The R2 value of 0.457 implies that business logistics influence 45.70% of financial performance while other factors influenced the remaining 54.30%. The indicator *Forecasting and demand management* have a beta of 0.325 and a corresponding P-value of 0.001, which showed a significant influence on the financial performance since the probability level is 0.001, which is less than the significance level at 0.05. Moreover, *Reverse logistics* has a beta of



0.397 and a P-value of 0.001, which means that it has a significant influence on financial performance since the probability level is 0.001, which is lower than the level of significance at 0.05. However, *Transportation and Warehousing* have a beta of 0.113 and -0.101 and a P-value of 0.167 and 0.256, respectively. The result mentioned above means that among the domains of Business Logistics, only *Forecasting and Demand Management, and Reverse Logistics* significantly influence the Financial Performance of SMEs as these indicators got a p-value of less than 0.05 significance level. Therefore, the null hypothesis is rejected.

Table 4. Regression Analysis on the Influence of Business Logistics on Financial Performance of SME's

Business Logistics (Indicators)	B (Unstandardized coefficients)	β (Standardized coefficients)	t-value	p-value
Constant	0.931		4.468	<.001
Transportation	0.078	0.113	1.385	0.167
Warehousing	-0.066	-0.101	-1.138	0.256
Forecasting and Demand Management	0.350	0.325*	5.132	<.001
Reverse Logistics	0.344	0.397*	5.533	<.001
Dependent Variable:	Financial Performance of SME's			
R = 0.676		R ² = 0.457		
F-ratio = 63.655		p-value < .001		

*Significant at 0.05 significance level

This regression analysis shows the result on the influence of Business Logistics on the Financial Performance of SMEs. Transportation, Warehousing, Forecasting and Demand Management, and Reverse Logistics are used to Predict the overall results as predictors of financial performance of SMEs in Tagum City. The only indicators that have a result with a significant influence on the financial performance of SMEs in Tagum City are Forecasting and Demand Management and Reverse Logistics with a result of P-value of less than 0.05. The significance level in the P-value is the reason why the null hypothesis is rejected. The result of the regression supported by (Dietrich, et al., 2012; Hart, Lukoszova, & Kubikova, 2013; Hofmann, Rutschmann, 2018; Lui, Mantin, Wang, 2014; Tiemessen, et al., 2013) in terms of Forecasting and Demand Management. The author mentioned that forecasting predicts what will happen in the future in business management, which can result in product obsolescence if demand projections are too high or disgruntled customers if demand predictions are too low, customers may return the product as a result. That is an idea that also affects the financial performance since this is the goal of every SME is to earn profit more through forecasting the events that happen and implementing logistics in demand management to achieve the positive result of financial performance. In reverse logistics, as part of the significant influence on financial performance on SME's in Tagum City, it is supported by (Mellat-Parast and Spillan, 2014; Pal, 2017). Therefore, as mentioned in the previous chapter of the study, reverse logistics significantly influence financial performance. It was the same in the regression analysis provided in Table 4.

4. CONCLUSION:

Based on the findings, a conclusion is as follows: The level of business logistics of Small Medium Enterprises (SMEs) in Tagum City is high, although the forecasting and demand management indicator is very high, transportation, warehousing, and reverse logistics indicators have a high level, and the overall mean concludes a high level of business logistics of SMEs in Tagum City. It means that business logistics can affect the SMEs in Tagum City. The liquidity ratio, debt ratio, profitability ratio, and operating performance ratio indicators on the level of financial performance of SMEs have a high level of SMEs' financial performance. Thus, the overall mean of financial performance of SMEs is high, which means that the financial performance of SMEs is much observed. Furthermore, there is a significant relationship between business logistics and the financial performance of SMEs. Business logistics affects the financial performance of SMEs. The results are in congruence to the study of (Muslimin, 2016), which states that logistics are part of the supply chain, supporting business activity to achieve high performance.



5. RECOMMENDATIONS:

In the light of the initial finding and conclusion, the following recommendations offered: Warehousing, with the lowest mean, may improve. SMEs can increase their profitability by securing the quality of products, supplies or raw materials in the warehouse. SMEs must keep the warehouse organized and make the warehouse efficient, it is important that all products are stored in a safe place to avoid damages to the supplies and the maximization of available space is essential. Use inventory management software as a means of tracking all the products inside the warehouse to ensure the availability of the data. Also, managers should motivate its team to ensure that all employees understand their roles and actions in the business in order to have a higher productivity. Better warehousing contributes continuous improvement to the business. The level of business logistics of SMEs may be improved if the recommended will do. The level of financial performance of SMEs in Tagum City may improve through these recommendations. Profitability ratio, with the lowest mean, may be managed. Small Medium Enterprises (SMEs) should increase its profitability through managing and examining their operating costs on how to reduce the related costs in producing the products. Improve the quality of products and services offered that will attract more customers. Review and know the customers especially their buying behavior it will help to maintain the higher profitability of the business. Maintaining good relationship to the employees and customers are also essential to make the business competitive in the market by providing better quality of goods and services that leads to revenue growth and at the same time boost productivity. Figures/ Tables/Charts: (with numbering eg. 1, 1.1, 2, 2.1) at proper place and in center.

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